

~~Re-PRINT ALL~~

Work Order ID 115599

115599

Page 1

May-29-14 12:59:03 PM

Item ID: D3488-042

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Blade Fitting RH

Start Date: 04/04/2014 Start Qty: 12.00

12

Cust Item ID:

Required Date: 04/04/2014 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3488

Rev B

DSK 101

REV D

100

0.00

100

DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Dwg DSK 101 & Folio FA625

2-Deburr

12 0 DAS
40
9-89
14/06/01

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

12 0 DAS
40
9-89
14/06/01

115599

May-29-14 12:59:03 PM

N900040100

Setup Start *NS1*

Stop *NS2*

12

Cust Item ID:

12

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120

0.00

120

HAAS CNC VERTICAL MACHINING #1

HAAS | 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine as per Folio FA627 & Dwg D34882-Deburr

10 2 DAS
37
9-89 14.06.24

130

0.00

130

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

10 2 DAS
37
9-89 14.06.24

140

0.00

140

QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

DAS
14
9-69

10 _____ *into 132*

Work Order ID 115599

115599

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May-29-14 12:59:03 PM

Item ID: D3488-042 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Blade Fitting RH
 Start Date: 04/04/2014 Start Qty: 12.00 *12* Cust Item ID:
 Required Date: 04/04/2014 Req'd Qty: 12.00 *12* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Chemical Conversion Coat per QSI005 4.1	0.00							
150									
Hand Finish	Memo	0.00							
Hand Finishing									
160	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
160									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 8:15 OVEN TEMPERATURE: 845 FINISH TIME: 8:25								
170	QC3- Inspect Part Finish	0.00							
170									
QC	Memo	0.00							
Quality Control									

10 76 14-7-3
 10 8 14-7-17 15 9-89
 10x d 11 11/09/09 DAS 15 9-89

Work Order ID 115599

115599

Page 4

May-29-14 12:59:03 PM

Item ID: D3488-042 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Blade Fitting RH
 Start Date: 04/04/2014 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 04/04/2014 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180		0.00							
180	HandFinishing								
HandFinish	Memo	0.00							
Hand Finishing	Install Inserts as per Dwg D3488								
190		0.00							
190	QC5- Inspect part completeness to step on W/O								
QC	Memo	0.00							
Quality Control									
200		0.00							
200	Identify as per dwg & Stock Location: <u>FR-001</u>								
Packaging	Memo	0.00							
Packaging									

X10RH d gl 100710

10 014-7-7 BL

X10RH d gl 100710

Work Order ID 115599***115599***

Page 5

May-29-14 12:59:03 PM

Item ID: D3488-042 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Blade Fitting RH
Start Date: 04/04/2014 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 04/04/2014 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	QC21- Final Inspection - Work Order Release	0.00							
210									
QC	Memo	0.00							
Quality Control									

145 1407-08

4-7-8

Picklist Print

May-29-14 12:59:01 PM

Page 1

Work Order ID: 115599

115599

Parent Item: D3488-042

D3488-042

Parent Item Name: Blade Fitting RH

Start Date: 04/04/2014

Required Date: 04/04/2014

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A New Issue 06-02-28 JLM
IPP Rev:B As per Rev B 06-03-30 JLM
IPP Rev:C Now On Doosan Lathe JLM Verified BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty/ Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	----------------	----------------	--------

ALS7-1032-225	AELS8-1032-225	Purchased	No				Each	1,167.000		48 40			
---------------	----------------	-----------	----	--	--	--	------	-----------	--	-------	--	--	--

A1 S7-1032-225

**

Insert

ALS4-1032-225

Location

Loc Qty

Loc Code

FG

80

118520

80

FP001

1000

m128649

1000

ST280

87

m128179

87

D6103-003

Manufactured No

Each

48.0000

12

D6103-003

**

Round Billet, Aluminum

Location

Loc Qty

Loc Code

MAT043

48

113281

8

113646

12

115942

8

116860

20

DAS
40
9-89

14/05/31

DART AEROSPACE LTD		Work Order:	
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number:	D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 1 of 2	

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**

 ☐ **Prototype**

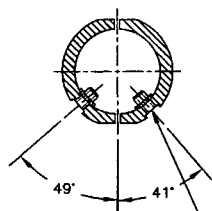
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
Ø2.150	+/-0.005	2.147	✓		VGW Mic	PHD-04
Ø2.780	+/-0.005	2.779	✓		"	"
Ø3.125	+/-0.010	3.123	✓		"	GA-10
Ø3.346	+/-0.010	3.346	✓		"	"
0.125 x 45°	+/-0.010 x +/-0.1°	.125	✓		VGW	PHD-12
8.000	+0.030/-0.000	8.014	✓		"	CNC-02
9.250	+/-0.010	9.250	✓		"	"
0.188	+/-0.010	.187	✓		"	PHD-12
R0.032	+/-0.010	.032	✓		Rad G	
R0.062	+/-0.010	.062	✓		"	
Ø0.297	+0.005/-0.001	.299	✓		PIN G	
Ø0.430	+/-0.010	.433	✓		"	
0.100	+/-0.010	.098	✓		VGW	PHD-12
0.125	+/-0.010	.131	✓		"	"
2.620	+/-0.010	2.620	✓		Mic	PHD-04
3.500	+/-0.010	3.500	✓		VGW	PHD-12
1.005	+/-0.010	1.005	✓		H. G.	31006
Ø0.484	+0.005/-0.001	.485	✓		PIN G	
1.180	+/-0.010	1.180	✓		VGW	PHD-12
3.150	+/-0.010	3.148	✓		"	"
3.070	+/-0.010	3.069	✓		"	"
R0.063	+/-0.010	.062	✓		Rad G	

DART AEROSPACE LTD		Work Order:	
Description: Blade Fitting, RH / Turning Detail for D3488-1/-2		Part Number:	D3488-2
Inspection Dwg: D3488 / DSK101 Rev: B / D		Page 2 of 2	

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Milling Section						
Ø0.508	+0.006/-0.001	.509	✓		PIN GAUGE	
0.750	+/-0.010	.749	✓		SKIB	8" VERN
1.500	+/-0.010	1.499	✓			
11.18	+/-0.030	11.182	✓			
R0.062	+/-0.010	R.062	✓			
0.125	+/-0.010	.123	✓			
0.590	+/-0.010	.588	✓			
0.793	+/-0.010	.790	✓			
1.351	+/-0.010	1.346	✓		HEIGHT GAUGE	
1.317	+/-0.010	1.318	✓		DR 01	0-1 MIC
1.802	+/-0.010	1.800	✓		HEIGHT GAUGE	

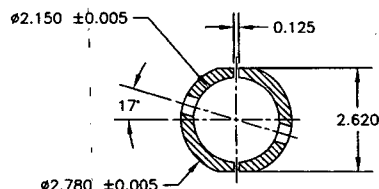
Measured by: ^{DAS} 40 ^{DAS} 37 9-89 9-89	Audited by: ^{DAS} 14 9-89	Prototype Approval:	N/A
Date: 14/06/24	Date: 14/06/30	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.03.31	New Issue	KJ/JLM	
B	08.09.19	Reformat P/O D3488-042	KJ/JLM	
C	08.12.02	Dimension 8.000 removed	KJ/JLM	



SECTION B-B

Ø0.297
C'BORE Ø0.430 x 0.100
INSTALL ALS4-1032-225 (OR AKS4-1032-225)
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)



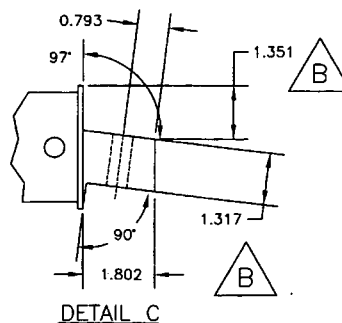
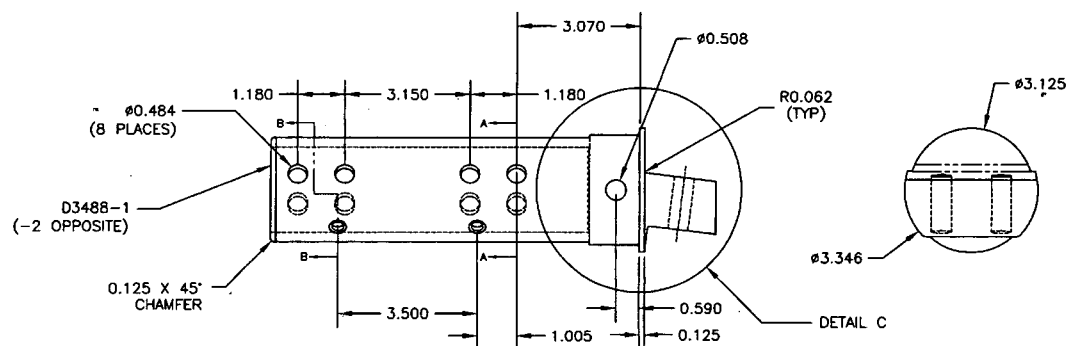
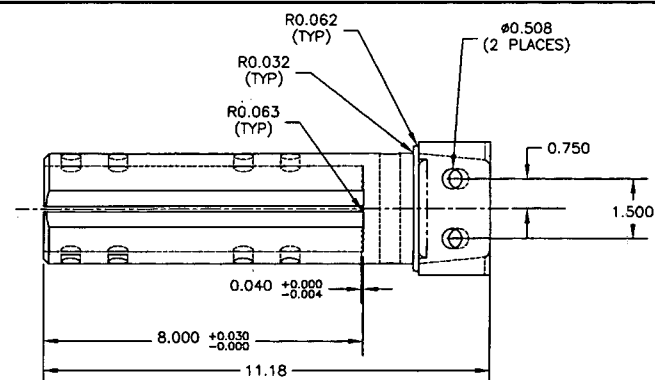
SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3488-041	BLADE FITTING ASSEMBLY (LH)
	X	D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



D3488-041 SHOWN (D3488-042 OPPOSITE)

RELEASED
06.03.15
PER DS
ELN #781

B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DRAWN BY PH
CHECKED	PH	APPROVED PH
DATE	06.03.15	TITLE
		BLADE FITTING
		DART AEROSPACE USA, INC.
		PORT HADLOCK, MA
		REV. B
		SHEET 1 OF 1
		SCALE
		1:3

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only ☐

Work Order: <u>115599</u> Part No. <u>3488-042</u> NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input checked="" type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input checked="" type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input checked="" type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input checked="" type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design <input type="checkbox"/>	14-06-25	120	2	1 POT TUBE IN WRONG WAY INTO THE FIXTURE. POSITIONED WRONG. RC OPERATOR ERROR.	DAS 16 9-89 <i>AS2442</i> <i>14/06/25</i>	Scrap & Destroy. No Rehm	14-06-24 DAS 37 9-89	<i>any</i> 14/06/30	DAS 16 9-89 1466/25 AS2442
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Handling/Pre <input type="checkbox"/>									
Material <input type="checkbox"/>									
Operator <input checked="" type="checkbox"/>									
Offset/Setup <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Transport <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input checked="" type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		
<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		